IN THE CLAIMS

Please amend the claims as follows:

Claim 1-13 (Canceled).

Claim 14 (New): A method for detection of end stops of a synchronous multi-phase gear motor operated in a stepped mode, using a measurement of a sum of currents circulating in each of N phases of a gear motor, the method comprising:

calculating an end-stop detection threshold relative to evolution of the sum of the currents.

Claim 15 (New): A detection method according to claim 14, wherein the measurement of the sum of the currents circulating in each of the N phases of the gear motor is obtained by sampling.

Claim 16 (New): A detection method according to claim 14, wherein the sampled current values are processed by a mathematical or statistical operation and the end-stop detection threshold is determined relative to the result of the processing.

Claim 17 (New): A detection method according to claim 14, further comprising detecting an end stop for discrimination between a zone of synchronous operation of the gear motor in micro-stepped mode and a zone of arrival at an end stop.

Claim 18 (New): A detection method according to claim 14, applied to two-phase stepper gear motors.

Claim 19 (New): A detection method according to claim 14, applied to three-phase stepper gear motors.

Claim 20 (New): A detection method according to claim 14, applied to gear motors of automobile air-conditioning valves.

Claim 21 (New): A detection method according to claim 14, further comprising determining maximum torque applicable by the gear motor.

Claim 22 (New): A detection method according to claim 14, further comprising determining loss of synchronization of a rotor of the gear motor.

Claim 23 (New): A detection method according to claim 14, applied to stepper gear motors having a reduction ratio of 1 to r, where r is a finite real number.

Claim 24 (New): A detection method according to claim 14, applied to stepper gear motors driven in micro-step mode with m micro-steps per step, where m is an integral number greater than or equal to 1.

Claim 25 (New): A multi-phase gear motor provided with a stepper motor and an electronic circuit for operation in a micro-stepped mode, comprising:

means for detecting an end stop of a circuit for measuring total current consumed by N phases of a motor.

Claim 26 (New): A multi-phase gear motor according to claim 25, wherein the end-stop detection means comprises a sampling resistor R1 and means for measuring, in the resistor, total current consumed in a sum of the N phases of the motor.